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## SHORT CURRICULUM VITAE

**Athanasios P. Liavas**

Professor and Department Chair

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### Personal Information

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*Date of birth :* June 9, 1966  
*Nationality* Greek  
*Address :* Department of Electronic and Computer Engineering  
Technical University of Crete  
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### Education

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*Sep 1989 – Oct 1993* *Ph.D in Engineering*  
Department of Computer Engineering and Informatics  
University of Patras, Greece  
*Thesis title :* Efficient concurrent algorithms for Signal  
Processing and System Identification  
Supervisor : Prof. Sergios Theodoridis

*Sep 1984 – Jun 1989* *B.Sc. in Computer Engineering and Informatics*  
Department of Computer Engineering and Informatics  
University of Patras, Greece

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## Research interests

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- Signal Processing for Communications
- Wireless Communications
- Information Theory

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## Employment

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<i>Sep 2009 – Present</i>	<i>Professor and Department Chair</i> Dept. ECE, Technical University of Crete, Greece.
<i>Mar 2004 – Aug 2009</i>	<i>Associate Professor</i> Dept. ECE, Technical University of Crete, Greece.
<i>Aug 2001 – Feb 2004</i>	<i>Assistant Professor</i> Dept. Mathematics, University of the Aegean, Greece.
<i>Jan 1999 – Jul 2001</i>	<i>Visiting Assistant Professor</i> Dept. Informatics, University of Ioannina, Greece.
<i>Jun 1998 – Dec 1998</i>	<i>Marie Curie Fellow (Return Grant)</i> Dept. Informatics, University of Athens, Greece.
<i>Jun 1996 – May 1998</i>	<i>Marie Curie Fellow</i> Dept. SIM, I.N.T., Evry, France.
<i>Aug 1995 – Apr 1996</i>	<i>Post – Doctoral Research Fellow</i> Biomedical Eng. Dept, Technical Univ. Ilmenau, Germany.

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## Research Projects

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<i>Oct 2006 – Sept 2009</i>	Coordinator and PI for TSI of the EU project <b>COOPCOM</b>
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## Teaching

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<i>Mar 2004 –</i>	<i>Department of ECE, Technical University of Crete</i> Information Theory (postgraduate) Network Information Theory (postgraduate) Estimation Theory (postgraduate) Detection Theory (postgraduate) Advanced Wireless Communications (postgraduate) Signals and Systems Digital Communications Systems II Wireless Communications
<i>Sep 2001 – Feb 2004</i>	<i>Department of Mathematics, University of the Aegean</i> Introduction to Informatics Programming Languages Time – Series Analysis (postgraduate)
<i>Jan 1999 – Aug 2001</i>	<i>Department of Informatics, University of Ioannina</i> Discrete Mathematics Digital Signal Processing Digital Image Processing

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## Honors/Scholarships

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<i>Jun 1998 – Dec 1998</i>	Marie Curie Fellowship (Return Grant) ( <i>EU</i> )
<i>Jun 1996 – May 1998</i>	Marie Curie Fellowship ( <i>EU</i> )
<i>Jan 1991 – Jun 1993</i>	Postgraduate Fellowship ( <i>Computer Technology Institute</i> )
<i>Sep 1984 – Jun 1989</i>	Undergraduate Fellowship ( <i>John Latsis Foundation</i> )
<i>Jun 2005 – Present</i>	Associate Editor, <i>IEEE Trans. Signal Proc.</i>
<i>Jan 2006 – Present</i>	Elected Member, <i>IEEE SPCOM TC</i>

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## Journal papers

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1. G. N. Karystinos and A. P. Liavas, "Efficient Computation of the Binary Vector that Maximizes a Rank-deficient Quadratic Form," *IEEE Trans. Info. Theory*, to appear.
2. D. Tsiouridou and A. P. Liavas, "On the sensitivity of the MIMO Tomlinson-Harashima precoder with respect to channel uncertainties," *IEEE Trans. Signal Proc.*, April 2010, to appear.
3. D. Tsiouridou and A. P. Liavas, "On the sensitivity of the transmit MIMO Wiener filter with respect to channel and noise second-order statistics uncertainties," *IEEE Trans. Signal Proc.*, vol. 56, no. 2, Febr. 2008.
4. A. P. Liavas and D. Tsiouridou, "On the performance of the mismatched MMSE and LS linear equalizers," *IEEE Trans. Signal Proc.*, vol. 55, no. 7, part 1, pp. 3302–3311, July 2007.
5. A. P. Liavas, "On the sensitivity of a suboptimum precoding scheme for frequency-selective block based channel with respect to channel inaccuracies," *IEEE Trans. Info. Theory*, vol. 51, no. 9, pp. 3374–3381, September 2005.
6. A. P. Liavas, "Tomlinson-Harashima precoding with partial channel knowledge," *IEEE Trans. Commun.*, vol. 53, no 1, pp. 5–9, January 2005.
7. A. P. Liavas, "On the robustness of the finite-length MMSE-DFE with respect to channel and second-order statistics estimation errors," *IEEE Trans. Signal Proc.*, vol. 50, no. 11, pp. 2866–2874, November 2002.
8. A. Beikos and A. P. Liavas, "Performance analysis and comparison of blind to non-blind least squares equalization with respect to effective channel overmodeling," *Signal Processing*, vol. 82, pp. 1233–1253, September 2002.
9. A. P. Liavas and P. A. Regalia, "On the behavior of information theoretic criteria for model order selection," *IEEE Trans. Signal Proc.*, vol. 49, no. 8, pp. 1689–1695, August 2001.
10. J-P. Delmas, H. Gazzah, A. P. Liavas and P. A. Regalia, "Statistical analysis of some second order methods for blind channel identification/equalization with respect to channel undermodeling," *IEEE Trans. Signal Proc.*, vol. 48, no. 7, pp. 1984–1998, July 2000.
11. A. P. Liavas, "Least-squares equalization performance versus equalization delay," *IEEE Trans. Signal Proc.*, vol. 48, no. 6, pp. 1832–1835, June 2000.
12. A. P. Liavas, P. A. Regalia and J-P. Delmas, "On the robustness of the linear prediction method for blind channel identification with respect to effective channel undermodeling/overmodeling," *IEEE Trans. Signal Proc.*, vol. 48, no. 5, pp. 1477–1481, May 2000.
13. A. P. Liavas, P. A. Regalia and J-P. Delmas, "Blind channel approximation: Effective channel length determination," *IEEE Trans. Signal Proc.*, vol. 47, no. 12, pp. 3336–3344, December 1999.

14. A. P. Liavas, P. A. Regalia and J-P. Delmas, "Robustness of the least squares and subspace methods for blind channel identification/equalization with respect to effective channel under-modeling/overmodeling," *IEEE Trans. Signal Proc.*, vol. 47, no. 6, pp. 1636–1645, June 1999.
15. A. P. Liavas and P. A. Regalia, "On the numerical stability and accuracy of the conventional RLS algorithm," *IEEE Trans. Signal Proc.*, vol. 47, no. 1, pp. 88–96, January 1999.
16. A. P. Liavas and P. A. Regalia, "Acoustic echo cancellation: Do IIR models offer better modelling capabilities than their FIR counterparts?," *IEEE Trans. Signal Proc.*, vol. 46, no. 9, pp. 2499–2504, September 1998.
17. A. P. Liavas, G.V. Moustakides, G. Henning, E. Psarakis and P. Husar, "A Periodogram based method for the detection of Steady-State Visually Evoked Potentials," *IEEE Trans. Biomedical Engin.*, vol. 45, no. 2, pp. 242–248, February 1998.
18. A. P. Liavas and S. Theodoridis, "Efficient Levinson and Schur-type algorithms for block near-to-Toeplitz systems of equations," *Signal Processing*, vol. 35, pp. 241–255, 1994.
19. S. Theodoridis and A. P. Liavas, "Highly concurrent algorithm for the solution of  $\rho$ -Toeplitz system of equations," *Signal Processing* vol. 24, pp. 165–176, 1991.

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### Conference papers

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1. A. P. Liavas and G. N. Karystinos, "Outage capacity of a noncoherent cooperation scheme with binary input and a simple relay, *IEEE ISWPC 2008*.
2. G. N. Karystinos and A. P. Liavas, "Outage capacity of a cooperation scheme with binary input and a simple relay," *IEEE ICASSP 2008* (journal version in preparation).
3. G. N. Karystinos and A. P. Liavas, "Efficient computation of the binary vector that maximizes a rank-deficient quadratic form," *IEEE ICASSP 2008* (journal version in preparation).
4. D. Tsipouridou and A. P. Liavas, "On the sensitivity of transmit Wiener filtering for broadcast channels with respect to channel estimation errors," *IEEE ICASSP*, April 2007.
5. G. N. Karystinos and A. P. Liavas, "Efficient computation of the binary vector that maximizes a rank-3 quadratic form," *Proc. Allerton 2006*.
6. A. P. Liavas, "Sensitivity analysis of a suboptimal precoding scheme for block channels with respect to channel inaccuracies," *IEEE ICASSP*, March 2005.
7. A. P. Liavas, "Robustness of the finite-length MMSE-DFE with respect to channel and second-order statistics estimation errors," *Proc. EUSIPCO*, Toulouse, August 2002.
8. A. P. Liavas, "On the robustness of the finite-length MMSE-DFE with respect to channel and second-order statistics estimation errors," *Proc. IEEE Workshop on Statistical Signal Processing*, Singapore, August 2001.

9. J-P. Delmas, H. Gazzah and A. P. Liavas, "Statistical analysis of second-order statistics methods for blind channel identification," *Proc. First Int. Conf. on Mathematics for Signal Processing*, London, December 1998.
10. A. P. Liavas, P. A. Regalia and J-P. Delmas, "Blind channel approximation: Effective channel length determination," *Proc. Asilomar Conf. on Signals, Systems and Computers*, Pacific-Grove, CA, November 1998.
11. A. P. Liavas, P. A. Regalia and J-P. Delmas, "Robustness of least-squares and subspace methods for blind channel identification/equalization algorithms with respect to channel undermodeling," *Proc. EUSIPCO*, Rodos, September 1998.
12. A. P. Liavas and P. A. Regalia, "Numerical accuracy issues of recursive least squares algorithms," *Proc. IEEE Int. Conf. Acoustics, Speech and Signal Processing 1998*, Seattle, May 1998.
13. A. P. Liavas and P. A. Regalia, "Performance Assessments of IIR and FIR models for Acoustic Echo Cancellation," *Proc. Inter. Workshop on Acoustic Echo and Noise Control*, London, Sept. 1997.
14. A. P. Liavas, G. V. Moustakides, G. Henning, E. Psarakis and P. Husar, "On the detection of Steady-State Visually Evoked Potentials," *Proc. IEEE Int. Conf. Biomedical Eng.*, Amsterdam, November 1996.
15. A. P. Liavas and S. Theodoridis, "Novel Schur-type algorithm for near-to-Toeplitz linear systems with multichannel entries," *Proc. EUSIPCO*, Brussels, August 1992, pp. 879–882.
16. A. P. Liavas and S. Theodoridis, "Efficient Levinson-type algorithm for block  $\rho$ -Toeplitz system solution," *Proc. IEEE Int. Conference Acoustics, Speech and Signal Processing*, Toronto, May 1991. pp. 2265–2268.